

REMARKS

In the Office Action, Claims 1 and 8 were rejected under 35 U.S.C. § 112, second paragraph, for insufficient antecedent basis; Claims 1-14 were provisionally rejected based on a judicially created doctrine of nonstatutory obviousness-type double patenting (“ODP”) as being unpatentable over Claims 1-12 of co-pending U.S. Patent application serial number 10/695,579, (herein referred to as the “579 appl.”); Claims 1-14 were also provisionally rejected based on a judicially created doctrine of nonstatutory ODP as being unpatentable over Claims 1-18 of co-pending U.S. Patent application serial number 10/694,197 (herein referred to as the “197 appl.”) in view of Patent Application Publication US 2004/0156328 A1 of Walton et al.; Claims 1-2 [sic 1-3] and 8-9 [sic 8-10] were rejected under 35 U.S.C. § 103(a) as being unpatentable over Patent Application Publication US 2003/0002518 A1 of Shibutani in view of a publication entitled “A New Soft Handover Scheme Using Punctured Turbo Codes in the Wideband CDMA System” by Kim et al.; and Claims 4-7 and 11-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shibutani in view of a Kim et al. and further in view of Walton et al. The Office Action also requested information under 37 CFR 1.105 in regard to “the art suggested by the applicant as relevant to this examination in figures 3-5 and 7 and paragraphs 13-27 and 31-35.” (Office Action, bottom of page 2.)

The “Office Action Summary” page of the Office Action indicates that the Specification was objected to. However, no such objection is discussed in the body of the Office Action. Accordingly, identification is respectfully requested of any portions of the Specification that are objected to.

Regarding the Examiner’s request for information pursuant to 37 C.F.R. § 1.105, Applicants filed Information Disclosure Statements on March 15, 2004 and July 14, 2006 that include information relevant to these sections of the application. It is respectfully asserted that Applicants are not aware of any additional information relevant to these sections of the application.

Claims 1 and 8 have been amended. No new subject matter is presented.

In regard to the rejection of Claims 1 and 8 under 35 U.S.C. § 112, second paragraph, for insufficient antecedent basis, the Examiner stated that there is insufficient antecedent basis for the limitation “the modulation scheme” in Claims 1 and 8. (Office Action, page 3.) It is respectfully submitted that this rejection is overcome by the clarifying amendments to Claims 1 and 8 made herein.

In regard to the ODP rejections of Claims 1-14 of the instant application, which were rejected in view of Claims 1-12 of the ‘579 appl., which presents two pending independent claims, Claims 1 and 8, like the instant application, it is respectfully submitted that the ODP rejection should be withdrawn at least because the ‘579 appl. was filed after this instant application.¹ Claims 1-14 of the instant application were also rejected in view of Claims 1-14 of the ‘197 appl. in view of Walton et al. Since prosecution of both applications is ongoing, amendment of the claims of either application will eliminate the ODP rejection. Accordingly, until an indication is provided that the only remaining rejection is an ODP rejection, prosecution should continue without the need for a Terminal Disclaimer, at least until an indication is provided that the only remaining rejection is an ODP rejection.

In regard to the rejection of Claims 1-2 [sic, 1-3] and 8-9 [sic, 8-10] in view of the combination of Shibutani and Kim et al., the Examiner stated that Shibutani discloses all of the recitations of each of independent Claims 1 and 8, other than “transmitting a symbol stream output from a second similar path and a symbol output from a third path through the second transmission antenna after summing up the symbol streams, and transmitting a symbol stream output from the third path through the third transmission antenna” (Office Action, bottom of page 7 to page 8), which the Examiner alleged would have been a “mere duplication of essential working parts” (Office Action, page 8.) Figure 3 of Kim et al. was cited as disclosing four associated similar transmitting paths.

¹ The ‘579 application is the later-filed application. Accordingly, the ODP rejection should be withdrawn. “If ‘provisional’ ODP rejections in two applications are the only rejections remaining in those applications, the examiner should withdraw the ODP rejection in the earlier filed application thereby permitting that application to issue without need of a terminal disclaimer.” MPEP 804.I.B(1)

In the Office Action, the Examiner states that the apparatus for transmitting data recited in the present invention is anticipated by a modulation (144), a puncturing (146), a MUX (147) and a transmitter (148) shown in Fig. 3 of Shibutani, and the disclosures in paragraphs [0006], [0014] and [0043]-[0046] of Shibutani. Further, the Examiner states that the apparatus can be also anticipated from a rate matching (puncture) shown in Fig. 3 of Kim et al. That is, the disclosure of modulating data (144), and then puncturing the modulated data at a puncturer (146), multiplexing the punctured modulated data at a multiplexer (147) and transmitting the data to a transmitter (148) disclosed in Shibutani anticipates the apparatus for transmitting data using an overlapped antenna scheme recited in claim 1 of the present invention.

However, Shibutani fails to disclose a puncturing technique for achieving both multiplexing gain and diversity gain without overlapping of the transmission signals, i.e. the puncturing technique for eliminating an interference component caused by transmitting the overlapped signal, and the feature of summing up the modulation symbol streams and puncturing the same recited in the present invention.

The other cited reference of Kim et al. teaches that two rate matching units are respectively connected to two multiplexers and if data to be transmitted to a base station is respectively transmitted on different scheme, the performance for soft handover can be increased.

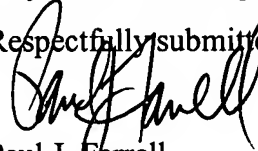
In contrast, the puncturing technique of the present invention achieves both multiplexing gain and diversity gain without overlapping of the transmission signals, i.e., the puncturing technique for preventing from overlapping the signal. Accordingly, the combination of Shibutani and Kim et al. fail to render Claim 1 or 8 of the present invention unpatentable.

For at least the above reasons independent Claims 1 and 8 are believed to be in condition for allowance. Without conceding the patentability *per se* of dependent Claims 2-7 and 9-14, these claims are likewise believed to be allowable by virtue of their dependence on their respective amended independent claims.

Accordingly, all of the claims pending in the Application, namely, Claims 1-14, are believed to be in condition for allowance. Should the Examiner believe that a telephone

conference or personal interview would facilitate resolution of any remaining matters, it is requested that the Examiner contact Applicants' attorney at the number given below.

Respectfully submitted,



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